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APPLICATION NO.	1	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/656,352		09/05/2003	Swee Kwang Chua	2269-5377.1US 7824 (02-0388.01	
24247	7590	03/12/2004		EXAMINER	
TRASK BI			CLARK, JASMINE JHIHAN B		
P.O. BOX 2550 SALT LAKE CITY, UT 84110				ART UNIT	PAPER NUMBER
				2815	
				DATE MAILED: 03/12/2004	

Please find below and/or attached an Office communication concerning this application or proceeding.

Application No. Application No. CHUA ET AL				
## Examiner ## Date		Application No.	Applicant(s)	
Jasmine Clark Jasmi		10/656,352	CHUA ET AL.	
- The MAILING DATE of this communication appears on the cover sheet with the correspondence address — Period for Reply A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ② MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION. Extensions of team reply be varietied under the provisions of 37 CFR 1.13(a). In ceivent, however, may a reply be timely filed 1 the period for reply specified allowed the the vice beautiful of 1969 against a reply within the adulatory minimum of timity (30) days, will be considered timely. 1 the period for reply is specified above, the maximum statutory portion will apply and will explore (50) MONTHS from the mailing date of this communication (50) days, a reply within the adulatory minimum of timity (30) days, will be considered timely. 1 the period for reply is specified above, the maximum statutory portion will apply and will explore (50) MONTHS from the mailing date of this communication. 1 Hospital or reply within the set or extended period for reply will, by adultion, greate the application is become ABANCONED (30 U.3 C. § 13.3). 2 description of the set of certain the mailing date of this communication, exert fitnedy filed, may return a reply within the set or extended period for reply within the application. 2 a) This action is FINAL. 2b) This action is non-final. 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) Claim(s) 1.26 is/are pending in the application. 4) Claim(s) 1.26 is/are allowed. 5) Claim(s) 1.26 is/are allowed. 6) Claim(s) 2.12 is/are objected to by the Examiner. 4) Claim(s) 2.12 is/are objected to by the Examiner. 5) The specification is objected to by the Examiner. 10) The drawing(s) filed on is/are: a) accepted of by	Oπice Action Summary	Examiner	Art Unit	
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MALINNO DATE OF THIS COMMUNICATION. - Extensions of time may be available unlet the proteiners of 37 CFR 1.136(a). In no event, however, may a reply be timely filed - Expensions of time may be available unlet the proteiners of 37 CFR 1.136(a). In no event, however, may a reply be timely filed - Extensions of time may be available unlet the proteiners of 37 CFR 1.136(a). In no event, however, may a reply be timely filed - If NO period for reply is specified above. The maximum statutory period will apply and voil ledges SIX (8) MONTHS from the making date of this communication. - Parkers to apply which his extor received in their controls and the mailing date of this communication, even if imoly filed, may reduce say unample and term adjustment. See 37 CFR 1.704(b). - Status 1) Responsive to communication(s) filed on				
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1) Responsive to communication(s) filed on	A SHORTENED STATUTORY PERIOD FOR REPLY THE MAILING DATE OF THIS COMMUNICATION. - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. - If the period for reply specified above is less than thirty (30) days, a reply If NO period for reply is specified above, the maximum statutory period w Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing	within the statutory minimum of thirty (30) day ill apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	nely filed s will be considered timely. the mailing date of this com D (35 U.S.C. § 133).	munication.
2a) ☐ This action is FINAL. 2b) ☑ This action is non-final. 3 ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11, 453 O.G. 213. Disposition of Claims 4) ☑ Claim(s) 1-26 is/are pending in the application. 4a) Of the above claim(s) is/are withdrawn from consideration. 5) ☑ Claim(s) 15-26 is/are allowed. 6) ☑ Claim(s) 1 is/are rejected. 7) ☑ Claim(s) 2-12 is/are objected to. 8) ☐ Claim(s) 2-12 is/are objected to. 9) ☐ The specification is objected to by the Examiner. 10 ☐ The drawing(s) filed on is/are: a) ☐ accepted or b) ☐ objected to by the Examiner. Application Papers 9) ☐ The proving sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) ☐ All b) ☐ Some * c) ☐ None of: 1. ☐ Certified copies of the priority documents have been received in Application No 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). *See the attached detailed Office action for a list of the certified copies not received. Attachment(s) 1) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) ☐ Internation Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 5) ☐ Notice of Informal Patent Application (PTO-152)	Status			
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4a) Of the above claim(s) is/are withdrawn from consideration. 5) □ Claim(s) 13-26 is/are allowed. 6) □ Claim(s) 2-12 is/are rejected. 7) □ Claim(s) 2-12 is/are objected to. 8) □ Claim(s) are subject to restriction and/or election requirement. Application Papers 9) □ The specification is objected to by the Examiner. 10) □ The drawing(s) filed on is/are: a) □ accepted or b) □ objected to by the Examiner. Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a). Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d). 11) □ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152. Priority under 35 U.S.C. § 119 12) □ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f). a) □ All b) □ Some * c) □ None of: 1. □ Certified copies of the priority documents have been received. 2. □ Certified copies of the priority documents have been received in Application No 3. □ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)). * See the attached detailed Office action for a list of the certified copies not received. Attachment(s) 1) ☑ Notice of Inflatpserson's Patent Drawing Review (PTO-948) 3) ☑ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) 5) ☑ Notice of Inflormal Patent Application (PTO-152)	Disposition of Claims			
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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Akram (US 5,936,305).

Akram teaches a device comprising a plurality of semiconductor dies 106, each semiconductor die having a back surface, and active surface and a plurality of signal connection devices (bond pad 110) on the active surface; a substrate 102 having a top surface, a bottom surface and a plurality of cavities formed in the top surface of the substrate 102, wherein each of the plurality of signal connection devices is positioned in one of the plurality of cavities and the active surface of the plurality of the semiconductor dies 106 are adhered to the top surface of the substrate 102, and wherein a plurality of openings is formed in the bottom surface of the substrate exposing the plurality of signal connection devices 110 therethrough; and a molding layer (see Fig. 5) over the top surface of the substrate and the back surfaces of the plurality of semiconductor dies 106.

Allowable Subject Matter

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2. Claims 2-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The applied reference fails to teach including a first dielectric layer upon the bottom surface of the substrate; and a plurality of openings in the first dielectric layer exposing the plurality of signal connection devices therethrough.

3. Claims 13-26 are allowed.

The following is an examiner's statement of reasons for allowance: the applied reference fails to teach and/or suggest the limitations as set forth in claims 13-15, 25, and 26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

The references Cited

4. Akram et al. (US 6,617,687 B2) show a plurality of connection devices in a plurality of cavities. Goetz et al. (US 6,175,161 B1) show a plurality of signal, power and ground layers, eg, 12a-12d within a substrate with connection signal devices, eg, bumps connected therefrom. Nishimori (JP 63-69258) show a plurality of semiconductor dies and timing interconnection layer in a substrate.

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Telephone Inquiry Contacts

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasmine Clark whose telephone number is (571) 272-1726. The examiner can normally be reached on M-F from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas, can be reached on (571) 271-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jjbc/03/03/04

JASMINE CLARK
PRIMARY EXAMINER